

## EAST Search History

| Ref # | Hits | Search Query       | DBs   | Default Operator | Plurals | Time Stamp       |
|-------|------|--------------------|---|------------------|---------|------------------|
| L1    | 374  | 549/72             | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2007/06/19 11:03 |
| L2    | 0    | I1 and duloxetin   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2007/06/19 11:03 |
| L3    | 17   | duloxetin          | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2007/06/19 11:04 |
| L4    | 333  | 549/74             | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2007/06/19 11:05 |
| L5    | 1    | I4 and duloxetin   | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2007/06/19 11:05 |
| L6    | 217  | I4 and thienyl     | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2007/06/19 11:05 |
| L7    | 13   | I6 and naphthyloxy | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT | OR               | ON      | 2007/06/19 11:05 |

10542003c

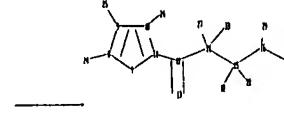
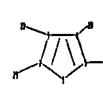
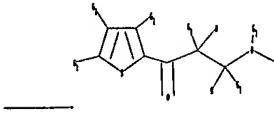
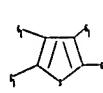
Thiophene + 3 chloropropiionic acid

=>

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to prep

3-methylamino-1-(2-thienyl)-  
1-propanone



chain nodes :

12 13 14 15 16 17 19 20 22 23 24 25 26 27 28 29 32 33

ring nodes :

1 2 3 4 5 7 8 9 10 11

chain bonds :

2-23 3-22 4-20 5-19 8-24 9-25 10-26 11-12 12-13 12-14 14-15 14-27 14-33  
15-16 15-28 15-32 16-17 16-29

ring bonds :

1-2 1-5 2-3 3-4 4-5 7-8 7-11 8-9 9-10 10-11

exact/norm bonds :

2-23 3-22 4-20 5-19 8-24 9-25 10-26 12-13 14-27 15-16 15-28 16-17 16-29

exact bonds :

1-2 1-5 2-3 3-4 4-5 7-8 7-11 8-9 9-10 10-11 11-12 12-14 14-15 14-33  
15-32

isolated ring systems :

containing 1 : 7 :

G1:H,CH3

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom  
12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 19:CLASS 20:CLASS  
22:CLASS 23:CLASS  
24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 32:CLASS 33:CLASS

fragments assigned product role:

containing 7

fragments assigned reactant/reagent role:

containing 1

L36 STRUCTURE UPLOADED

=> d

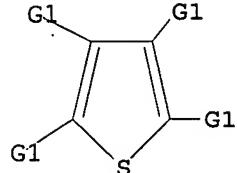
L36 HAS NO ANSWERS

Karen Cheng

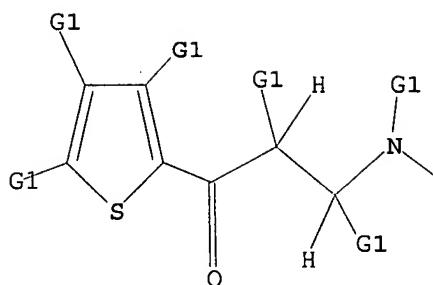
10542003c

L36

STR



G1 H, Me



Structure attributes must be viewed using STN Express query preparation.

```
=> s 136 full
FULL SEARCH INITIATED 12:04:28 FILE 'CASREACT'
SCREENING COMPLETE - 1156 REACTIONS TO VERIFY FROM 228 DOCUMENTS
100.0% DONE 1156 VERIFIED 14 HIT RXNS 3 DOCS
SEARCH TIME: 00.00.01
L37 3 SEA SSS FUL L36 ( 14 REACTIONS)
=> d ibib abs hitstr tot
```

10542003c

=> d ibib abs tot

L37 ANSWER 1 OF 3 CASREACT COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 144:253785 CASREACT <<LOGINID::20070329>>  
TITLE: Thienylsubstituted derivatives of  $\alpha$ -aminobutanoic acid. Practical approach to enantiomerically pure  $\gamma$ -hydroxy- $\alpha$ -aminoctanoic and  $\gamma$ -hydroxy- $\alpha$ -aminononanoic acids  
AUTHOR(S): Berkes, Dusan; Gubala, Vladimir; Povazanec, Frantisek  
CORPORATE SOURCE: Department of Organic Chemistry, Slovak Technical University, Bratislava, SK-812 37, Slovakia  
SOURCE: International Electronic Conferences on Synthetic Organic Chemistry, 5th, 6th, Sept. 1-30, 2001 and 2002 [and] 7th, 8th, Nov. 1-30, 2003 and 2004 (2004), 1393-1404. Editor(s): Seijas, Julio A. Molecular Diversity Preservation International: Basel, Switz.  
CODEN: 69GTCO  
DOCUMENT TYPE: Conference; (computer optical disk)  
LANGUAGE: English  
AB The series of both syn- resp. anti- $\gamma$ -thienyl- $\gamma$ -hydroxy- $\alpha$ -aminobutanoic acids can be prepared using conjugate addition of chiral nonracemic 1-phenylethylamines on the corresponding  $\beta$ -thienoylacrylic acids and asym. reduction as the key steps of the synthesis. Raney nickel desulfurization in the hydrogen atmospheric represents straightforward access to the enantiomerically pure syn- resp. anti- $\gamma$ -hydroxy- $\alpha$ -aminoctanoic resp. nonanoic acids derivs.  
REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

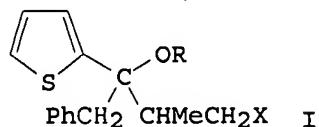
L37 ANSWER 2 OF 3 CASREACT COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 141:296283 CASREACT <<LOGINID::20070329>>  
TITLE: Stereoselective synthesis and preliminary evaluation of new -3-heteroarylcarbonylalanines as ligands of the NMDA receptor  
AUTHOR(S): Lima, Paulo G.; Caruso, Rodrigo R. B.; Alves, Simone O.; Pessoa, Renata F.; Mendonca-Silva, Dayde L.; Nunes, Ricardo J.; Noel, Francois; Castro, Newton G.; Costa, Paulo R. R.  
CORPORATE SOURCE: Laboratorio de Quimica Bioorganica, Nucleo de Pesquisas de Produtos Naturais, Centro de Ciencias da Saude, Bloco J, Universidade Federal do Rio de Janeiro, Rio de Janeiro, 21941-590, Brazil  
SOURCE: Bioorganic & Medicinal Chemistry Letters (2004), 14(17), 4399-4403  
CODEN: BMCLE8; ISSN: 0960-894X  
PUBLISHER: Elsevier B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB New N-heteroarylcarbonylalanines of the D-series were stereoselectively prepared by stereoselective conjugate addition of benzylamine to enolates derived from D-mannitol. These compds. were active in binding and functional assays of the NMDA sub-type of glutamate receptors. (2R)-3-(2-Pyridinylcarbonyl)alanine inhibited MK801 binding, protected neurons from excitotoxic damage and blocked NMDA-induced currents in neurons. (2R)-3-(2-Thienylcarbonyl)alanine pos. modulated the NMDA receptor, possibly through the allosteric glycine site. described.

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REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L37 ANSWER 3 OF 3 CASREACT COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 95:219931 CASREACT <<LOGINID::20070329>>  
TITLE: Synthesis of thiophene derivatives  
AUTHOR(S): Zhelyazkov, L.; Natova, L.; Dzhabur, S.  
CORPORATE SOURCE: Bulg.  
SOURCE: Godishnik na Visschiya Khimikotekhnologicheski  
Institut, Sofiya (1981), Volume Date 1978, 24(4),  
67-74  
CODEN: GVKIAH; ISSN: 0489-6211  
DOCUMENT TYPE: Journal  
LANGUAGE: Bulgarian  
GI



AB Acylating thiophene with EtCOCl in C6H6 at 0° yielded 80% 2-propionylthiophene, which was aminomethylated with HCHO and Me2NH, pyrrolidine, piperidine or 1-methylpiperazine to give 4 corresponding [(aminomethyl)propionyl]thiophenes in 53.3-68.0% yield. Reductive benzylation of the latter with PhCH2MgCl gave 73.6-88.9% carbinols I (R = H, X = secondary amino), which gave 85.0-93.0% I (R = Ac, same X) with AcCl.

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10542003c

chain nodes :  
12 13 14 15 16 17 19 20 22 23 24 25 26 27 28 29 32 33 34 35 36  
37 38 39  
ring nodes :  
1 2 3 4 5 7 8 9 10 11  
chain bonds :  
2-23 3-22 4-20 5-19 8-24 9-25 10-26 11-12 12-13 12-14 14-15 14-27 14-33  
15-16 15-28 15-32 16-17 16-29 34-35 35-36 35-39 36-37 37-38  
ring bonds :  
1-2 1-5 2-3 3-4 4-5 7-8 7-11 8-9 9-10 10-11  
exact/norm bonds :  
2-23 3-22 4-20 5-19 8-24 9-25 10-26 12-13 14-27 15-16 15-28 16-17 16-29  
35-39  
exact bonds :  
1-2 1-5 2-3 3-4 4-5 7-8 7-11 8-9 9-10 10-11 11-12 12-14 14-15 14-33  
15-32 34-35 35-36 36-37 37-38  
isolated ring systems :  
containing 1 : 7 :

G1:H,CH3

Match level :  
1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom  
12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 19:CLASS 20:CLASS  
22:CLASS 23:CLASS  
24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 32:CLASS 33:CLASS  
34:CLASS 35:CLASS  
36:CLASS 37:CLASS 38:CLASS 39:CLASS  
fragments assigned product role:  
containing 7  
fragments assigned reactant/reagent role:  
containing 1  
containing 34

L38 STRUCTURE UPLOADED

=> s 138 full  
FULL SEARCH INITIATED 12:07:12 FILE 'CASREACT'  
SCREENING COMPLETE - 8 REACTIONS TO VERIFY FROM 4 DOCUMENTS  
100.0% DONE 8 VERIFIED 0 HIT RXNS 0 DOCS  
SEARCH TIME: 00.00.01  
L39 0 SEA SSS FUL L38 ( 0 REACTIONS)

Karen Cheng

10542003c

=>  
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chain nodes :

12 13 14 15 16 17 19 20 22 23 24 25 26 27 28 29 32 33 34 35 36  
37 38 39

ring nodes :

1 2 3 4 5 7 8 9 10 11

chain bonds :

2-23 3-22 4-20 5-19 8-24 9-25 10-26 11-12 12-13 12-14 14-15 14-27 14-33  
15-16 15-28 15-32 16-17 16-29 34-35 35-36 35-39 36-37 37-38

ring bonds :

1-2 1-5 2-3 3-4 4-5 7-8 7-11 8-9 9-10 10-11

exact/norm bonds :

2-23 3-22 4-20 5-19 8-24 9-25 10-26 12-13 14-27 15-16 15-28 16-17 16-29  
35-39

exact bonds :

1-2 1-5 2-3 3-4 4-5 7-8 7-11 8-9 9-10 10-11 11-12 12-14 14-15 14-33  
15-32 34-35 35-36 36-37 37-38

isolated ring systems :

containing 1 : 7 :

G1:H,CH3

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom  
12:CLASS 13:CLASS 14:CLASS 15:CLASS 16:CLASS 17:CLASS 19:CLASS 20:CLASS  
22:CLASS 23:CLASS

24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 32:CLASS 33:CLASS

34:CLASS 35:CLASS

36:CLASS 37:CLASS 38:CLASS 39:CLASS

fragments assigned product role:

containing 7

fragments assigned reactant/reagent role:

containing 1

containing 34

Karen Cheng

10542003c

L38 STRUCTURE UPLOADED

=> s 138 full  
FULL SEARCH INITIATED 12:07:12 FILE 'CASREACT'  
SCREENING COMPLETE - 8 REACTIONS TO VERIFY FROM 4 DOCUMENTS  
100.0% DONE 8 VERIFIED 0 HIT RXNS 0 DOCS  
SEARCH TIME: 00.00.01

L39 0 SEA SSS FUL L38 ( 0 REACTIONS)